

114. (new): The composition of claim 57, wherein the coupling agent has a storage life of not less than about 3 months and is unreactive except at elevated temperature of between 130 and 180 °C at which the one-pack retroreflective ink printed on the substrate is cured.

115. (new): The method of claim 82, wherein the coupling agent has a storage life of not less than about 3 months and is unreactive except at elevated temperature of between 130 and 180 °C at which the one-pack retroreflective ink printed on the substrate is cured.

116. (new): The combination of claim 68 wherein the microbeads have at least one of the following characteristics selected from the group consisting of: a refractive index in the range of about 1.8 to 2.2, a median size of the microbeads in the range of about 10 to 100 microns and the microbeads are composed of titanium glass or barium glass.

117. (new): The method of claim 91 wherein the microbeads have at least one of the following characteristics selected from the group consisting of: a refractive index in the range of about 1.8 to 2.2, a median size of the microbeads in the range of about 10 to 100 microns and the microbeads are composed of titanium glass or barium glass.

REMARKS

Claims 57 to 113 of the present application are pending, with claims 74 to 81 and 106 to 113 being withdrawn from consideration, leaving claims 57 to 73 and 82 to 105 pending, and each of those being rejected by the Examiner.

Response to 35 U.S.C. § 112 Rejections

The examiner has rejected claims 57, 58 and 82 under 35 U.S.C. §112, second paragraph, as being indefinite and/or lacking antecedent basis.

Amendments have been made to the claims in order to more particularly point out the subject matter of Applicant's invention, and to provide antecedent basis. In particular, claims 57 and 82 have been amended to remove the references to one- or two-pack inks and to printing, and to further distinguish the features of the coupling agent as: (a) having a storage life of not less than about three months; (b) being unreactive except at elevated temperature of between 60 and 200°C, at which temperature the one-pack retroreflective ink applied to the substrate is cured; and (c) being selected from the group consisting of an amino alkyl silanetriol and a blocked polyisocyanate.

Support in the specification for the amendment regarding storage life is to be found at, e.g. the paragraph bridging pages 2 and 3 of WO 00/42113. Support for the temperature ranges at which the coupling agent becomes reactive, can be found in the first full paragraph on page 3 of WO 00/42113. Support for the specific classes of coupling agent is to be found at paragraph 3 on page 7 of WO 00/42113. Enablement for other amendments comes from claims previously on file.

In addition, new claims 114-117 have been added. Claims 114-115 further describe the temperature at which the coupling agent becomes reactive, and claims 116-117 are directed to features of the microbeads. Support for the temperature ranges in claims 114-115 at which the coupling agent becomes reactive can be found in the first full paragraph on page 3 of WO

00/42113. Support for claims 116-117 directed to features of the microbeads is provided by original page 5 and claim 21 of the PCT application.

Please note that a correction has been made to claims 73 and 104 to replace the term "Pascals" with "Pascal seconds." This is a correction of a typo. Reference in the claims is to a measurement of viscosity, whereas "Pascals" is a unit of pressure. The application should have read "Pascal s", i.e., "Pascal seconds". "Pascal seconds" is the only IS unit of measurement for viscosity which resembles "Pascals," and so the correction is believed to be an obvious one and therefore allowable.

Response to 35 U.S.C. § 103 Rejections

Claims 57 to 59, 61 and 64 to 73 have been rejected by the Examiner under 35 U.S.C. § 103 as being obvious over JP 03-259969 ("the '969 publication") in view of Rizika et al., U.S. Patent No. 5,650,213 ("the '213 patent"). Claim 62 has been rejected as obvious over the '969 publication, the '213 patent and Yoshida et al., U.S. Patent No. 4,985,484 ("the '484 patent"). Claims 63, 60 (presumably this is a typo by the Examiner and should be "63, 69") and 82 to 104 has been rejected as obvious in view of the '969 publication, the '213 patent and WO 95/14248.

With regard to the question of obviousness, Applicant respectfully reminds the Examiner that the Federal Circuit noted in *In re Fritch* that:

Under Section 103, teachings of references can be combined *only* if there is some suggestion or incentive to do so. Although couched in terms of combining teachings found in the prior art, the same inquiry must be carried out in the context of a purported obvious "modification" of the prior art. The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art

suggested the desirability of the modification. (emphasis original) 23 U.S.P.Q. 2d 1780, 1784 (Fed. Cir. 1992).

None of the cited prior art references suggest any motivation or desire to combine the references to accomplish Applicant's present invention. Certain specific examples of the lack of motivation to combine are provided below. Further, even if there was a suggestion to combine the cited references, each of the combinations would be missing at least one, if not more, elements of Applicant's presently claimed invention. Specifically, no combination of the cited references shows a coupling agent that: (a) has a storage life of not less than about three months; (b) is unreactive except at the elevated temperature of between 60 and 200°C, at which temperature the one-pack retroreflective ink applied to the substrate is cured; and (c) is selected from the group consisting of an amino alkyl silanetriol and a blocked polyisocyanate. Thus, the present invention as claimed is distinguishable.

Claims 57-59, 61 and 64-73

Applicant believes that claim 57, as presently amended, is not obvious in light of the cited prior art, and therefore allowable. Also, independent claims 59, 61 and 64 to 73 are valid since they are dependent upon an allowable claim. Applicant has canceled claim 58.

The Examiner admits that the '969 publication does not explicitly teach that the coupling agent is unreactive until at elevated temperature, and presumes that the coupling agent of the present invention is the same as in the '969 publication, and that as a result, the properties would be the same (see Office Action, page 2, paragraph 1). In the present claims, however, the coupling agent is different and distinct from that described in the '969 publication. For example, the coupling agent of the present invention relates to blocked coupling agents, for example,

either an aminoalkyl silanetriol or a blocked polyisocyanate, while the coupling agent of the '969 publication is an unblocked isocyanate trimer. No suggestion is made in the '969 publication of using a blocked coupling agent. Also, the coupling agents of the present invention are unreactive until either chemically or physically removed, whereas the coupling agent of the '969 publication is immediately reactive.

Further, the '969 publication provides that the printing inks have a "long pot life" of six hours, twice as long as conventional inks. In contrast, the presently claimed invention has a pot life of three months. Although the '969 publication seeks to extend pot life prior to curing, it does not make any suggestion that any additional step should be introduced in order to effect curing, such as heating to elevated temperatures as required by the present invention. The '969 publication states that the advantage of its coating is its extended pot-life, which make it suitable for exterior coating of optical instruments, electric home appliances and audio-visual instruments. Clearly, the formulation of the '969 publication is incompatible with the elevated temperatures of the curing step of the present claims, as the increased heat would inevitably damage the aforementioned electrical equipment.

Absent any specific teaching of the coupling agents of the present invention, the '969 publication provides no motivation for a person of ordinary skill in the art to make the claimed invention, nor any suggestion as to how it might be achieved. Indeed, the '969 publication implicitly teaches against the present claims, since the claims require a curing step which would be wholly incompatible with the requirements of the '969 publication.

As to the '213 patent, this patent does not teach or suggest the use of the specific coupling agents claimed in the present invention. Therefore, if combined with the '969 publication, the '213 patent still would not result in the subject matter of the presently amended claims. As a result, the present claims are distinguishable.

Claim 62

Applicant believes that claim 62, as presently written, is not obvious in light of the cited prior art, because claim 62 is dependent on claim 57, which, as detailed above, Applicant believes to be clear of the cited art and therefore allowable.

Claims 63, 69 and 82-104

Claims 63 and 69 are dependent upon claim 57. As claim 57 is believed to be allowable, its dependent claims are believed to be similarly allowable.

With regard to claims 82 to 104, claim 82 is independent and has been amended to incorporate additional features as per claim 57. Therefore, as above, the cited art fails to teach or make obvious each of the features recited in claim 82, and thus claim 82 and its dependent claims 83 to 104 are believed to be allowable.

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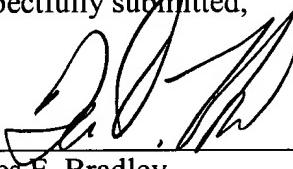
In commenting upon the references and in order to facilitate a better understanding of the differences that are expressed in the claims, certain details of distinction between the references and the present invention have been mentioned, even though such differences do not appear in all of the claims. It is not intended by mentioning any such unclaimed distinctions to create any

implied limitations in the claims. Not all of the distinctions between the prior art and Applicant's present invention have been made by Applicant. For the foregoing reasons, Applicant reserves the right to submit additional evidence showing the distinctions between Applicant's invention to be unobvious in view of the prior art.

The foregoing remarks are intended to assist the Examiner in re-examining the application and in the course of explanation may employ shortened or more specific or variant descriptions of some of the claim language. Such descriptions are not intended to limit the scope of the claims; the actual claim language should be considered in each case. Furthermore, the remarks are not to be considered to be exhaustive of the facets of the invention, which render it patentable, being only examples of certain advantageous features and differences that Applicant's attorney chooses to mention at this time.

Reconsideration of the application and allowance of all of the claims are respectfully requested. In view of the foregoing Amendment, Applicant respectfully submits that all of the claims are allowable, and Applicant respectfully requests the issuance of a Notice of Allowance.

Respectfully submitted,



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